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ORNITHOLOGICAL REPORT FOR NORFOLK (1905).

By J. H. Gurney, F.Z.S.

(Assisted by several Norfolk Naturalists.)

(Plate II.)

The year 1905 produced two birds new to Norfolk, but it was a year devoid of much visible migration, except for the extended nocturnal movement of Aug. 25th, and that could hardly be called visible. There was not enough windy and unsettled weather to bring the movements of the birds under notice. The *Corvidæ*, which are always a criterion with us, have not been noticed in any such great numbers as sometimes occur. The chief autumn passage was that observed by Mr. F. Boyes in South Lincolnshire on Oct. 9th and 10th, which evidently extended to Norfolk, where it was recognized by the Rev. M. C. Bird.

Vernal Migration.—The spring migration of 1905 into England was studied by a Committee appointed by the British Ornithologists' Club, which has published a valuable Report, in which, referring to the east coast, it is pointed out (p. 58) that there is evidence of a departure northwards (probably to Norway) of Willow-Warblers from the coast of Norfolk at the end of April, and of Sedge-Warblers (p. 69) and Redstarts in the beginning of May. This I can readily believe, and should be inclined to add that the destination of spring migrants, which pass through Norfolk without halting, mainly depends on the wind, those which get a

S.W. wind going to Denmark or Norway, and those which meet with a S. or E. wind working up England.

What is really extraordinary about the emigration which takes place every spring from the east coast of England is its smallness, and the little notice it attracts, compared to the vast immigration in autumn. The departure of some of the *Corvidæ* is always seen in Norfolk, it is true, in spring, but very little besides. Where, it may be asked, are all those hosts of Sky-Larks which came last autumn from the north-east? Where are the thousands of Thrushes and Finches? Surely they ought to be returning in March and April, in diminished numbers, no doubt, but still in considerable bulk. This is one of the unsolved puzzles in ornithology, and only to be in part explained by a presumably large mortality among the birds during the winter.

Autumnal Migration.—Besides the annual migrations over the sea, there are certain coast movements in Norfolk, chiefly due to wind and weather, which must not be lost sight of by anyone who studies migration. These consist of passing bands of small birds, such as Swallows, Martins, Swifts, Wheatears, Sky-Larks, Finches, Redstarts, &c.; rarely more than five hundred yards from the sea, and often much nearer. It may be observed that they are nearly always going against the wind, the prevailing direction of which in September and October is west. They are not migrants in the restricted sense of the word, because they are often going the wrong way. This, I imagine, is because where the coast is bleak, as between Cromer and Mundesley, it is easier to move on against the wind than to remain stationary.

During October without doubt our ordinary visitants came over the sea, and the usual flights of large Gulls, following the shore-line in a north-westerly direction, took place at Cromer. This is a phenomenon of annual occurrence, but it is invariably to be noticed that they fly against the wind, and that as soon as it changes to E. or N.E. or S.E. the flocks of Gulls cease to pass (*cf.* 'The Ornithologist,' April, 1896, and 'Naturalist,' 1892, p. 360). That about one hundred thousand Gulls, chiefly Herring and Lesser Black-backed Gulls, pass Cromer nearly every autumn, going N.W., I verily believe, but very likely the same individuals pass more than once, in which case the actual number would be less. Ten thousand have been seen to pass in a day, after a gale

from N.W., and that more than once. At first sight one might suppose a great migration was in progress, but it is only a temporary movement against the wind.

In some autumns so many Rooks and other migratory birds are to be seen coming in against a west wind that some people have concluded that they preferred it from that quarter for crossing the North Sea; but probably the truth is that it delayed them, and, had it been from the east, the greater part of the birds would have passed on inland before daybreak. The *Corvidæ*, however, like the Sky-Larks, seem to be in great part day migrants by choice, which the vast majority of our feathered visitors are not. Migration is still a mystery in spite of all which has been written and learnt about it; but this much is certain—the Woodcock likes an east wind to travel with, and if a Woodcock arrives after 8 a.m. it is a delayed bird.

We know little of what goes on overhead at night. Occasionally the distant cries of some passing birds catch the ear, but the travellers themselves are invisible. If one of our navy searchlights were placed on Cromer Lighthouse hills, and its rays directed upwards, there would not be many nights in October when it would not reveal nocturnal migrants.

The chief rarities during 1905 have been—January: Water-Pipit (new to Norfolk). April: Snowy Owl. May: White Stork, two Stilts. June: Sea-Eagle (the first adult), nine Avocets. July: Stork. September: Red-breasted Flycatcher, Yellow-breasted Bunting (new to Norfolk).

The Pipit and the Bunting, new to the county, together with the Siberian Stonechat, erroneously given in last year's Report as a variety of the Common Stonechat, bring our list up to three hundred and fifteen. In this enumeration the Russian Bullfinch is included, but not the Short-toed Lark, which there is reason to believe was imported.

Neither the spring nor autumn migration of this year brought us a Hoopoe. This bird has become much rarer in Norfolk, Suffolk, and Lincolnshire, and the same is the case in the southern counties. The explanation of the gradual disappearance of this beautiful migrant seems to be this: those Hoopoes which used to come to England every spring were the birds which had wintered in France. Now these have all been

shot, and the Hoopoes which winter further south, *i. e.* in Spain, Algeria, and Italy, do not travel so far as England, for their migratory instinct tells them that their proper limit is the middle and north of France.

The rainfall for 1905 was 23·95 in. (E. Knight). The direction and force of the wind have been taken from the Daily Weather Reports for Yarmouth.

As many birds have been notified without exact dates, such are entered with D.U. (=date uncertain) against them.

January.

1st.—An Osprey seen over Hickling Broad, formerly a favourite resort of this fine fisher (A. Nudd); I never heard of one in January before.

5th.—The first snow soon passed away, and there was no weather hard enough to bring Whoopers. To-day, with a high wind (W., 4), my nephew saw about ten large "skeins" of Pink-footed Geese, some of them numbering over fifty, in Holkam Bay. Mr. A. Napier believes that the numbers on the Holkam and Burnham marshes exceed two thousand, surely the largest resort of Pink-footed Geese in Britain. A pair once remained as late as June, but generally they leave at the end of March.

20th.—E.N.E., 5. Fifteen Woodcocks on the coast at Runton, probably just arrived. We often have a flight as late as this, and these winter flights often synchronise with the advent of Blackbirds, Snipe, Wood-Pigeons, &c., and are very profitable to the sportsman.

23rd.—A Bittern seen at Brancaster.

25th.—W.N.W., 3. A Water-Pipit† (*Anthus spipoletta*), female, shot near the beach; it closely resembles a Rock-Pipit, but has been pronounced by Mr. Howard Saunders to be of this species, as indicated by the outer pair of tail-feathers, which are more than half white, as are as the tips of the second pair. All the tail-feathers are worn, especially the two middle ones, which are greatly abraded in this example, the first identified for Norfolk. It has been added to Mr. Connop's museum (Pashley). I met with a good many of this species in Switzerland this summer (1905) at the Riffel Alp.

FEBRUARY.

2nd.—Great Northern Diver shot off Heacham ('Field').

6th.—Bittern at Ingoldisthorpe (R. Clarke).

9th.—Bittern near Hickling (E. Saunders). Others reported (D.U.) in the neighbourhood of Lowestoft (Bunn). This is not too early for their spring "booming" to be heard.

20th.—N.N.E. In spite of snow and a cold "north-easter," Mr. J. Cox found a Hedge-Accentor's nest containing two eggs at Gresham, and another nest complete without eggs. A pair of Black Swans belonging to Mr. Knight have two eggs,† and Mr. Southwell informs me of another pair which have three (D.U.). Mistle-Thrush's nest at Brunstead (Bird). This is the month in which Blackbirds fight, and Partridges pair; Kestrels look out for breeding-sites, and the note of the Lapwing is heard.

27th.—Wild Duck flushed from nest (M. Bird). Five days later Mr. Bird knew of another nest containing twelve eggs of this always early species. At this season the Garganey Teal which I usually keep on my pond give utterance to a most peculiar note, which can be best described by the word "crick." It is quite unlike the note of any other wildfowl, resembling more that of one of the Crakes. It is only made by the drake Garganeys, and lasts for several weeks.

28th.—Mr. Pashley tells me that in the last week of February (D.U.) three Scandinavian Rock-Pipits were detected on passage, and it is not unlikely that this vinous-tinted race is less rare than has been supposed (*cf.* Zool. 1897, p. 128), and may be looked upon as an early spring visitant.

MARCH.

23rd.—S.E., 4. Ray's Wagtail already in Norfolk (Bull. B.O.C., xvii. 73).

29th.—*Hybrid Linnet.*—A Linnet × Greenfinch hybrid†—a male, of course, or it would not have been detected—taken near Yarmouth whilst consorting with Greenfinches (E. Saunders). It exhibits very distinctly the double parentage, closely resembling a bird of this cross in the Museum, with which Mr. Saunders and I compared it. Possibly it had escaped, as this cross is occasionally bred by bird-fanciers. Similar hybrids were caught at Yarmouth in 1882, and August, 1889, and were recorded at the time.

April.

Early in April (D.U.) a Snowy Owl had the misfortune, as I learn from Mr. W. Clarke, to put its foot in a rat-trap at Cocley Cley, near Swaffham. The owner of the soil intended sending it to the Zoological Gardens, but, though not damaged, it refused to feed in confinement, and did not long survive. It was probably the sharp cold of the 5th, 6th, and 7th, accompanied by snow, which brought this Norwegian stranger over; but April is a late date for it. It is always a more difficult bird to keep in confinement than the Eagle-Owl, and I am not surprised that Mr. Taylor was unsuccessful.

14th.—S., 4. A Black Redstart at the Inner Dowsing light-vessel (Bull. B. O. C. xv. p. 99).

17th.—E.N.E., 6. Grey Shrike at the Newarp lightship off Yarmouth (Bull. B. O. C. xvii. p. 125), where the wind blew a gale. I have had both these species from light-vessels before.

19th.—E.N.E., 6. More than thirty Red-legged Partridges discovered on the sand-hills near Yarmouth harbour-mouth, after a gale from the north-east (A. Patterson), in which quarter the wind had been for some time. I cannot believe in there being any immigration of this species, although some have thought so; but I certainly never heard of so many by the shore before. It has the same habit of appearing on the coast in Sussex, where I have seen one perched on a breakwater with the waves lapping against it.

26th.—N.W., 3. Nine Dotterel seen on Yarmouth "denes" (Patterson).

May.

1st.—A Grasshopper-Warbler, a Sedge-Warbler, a Blackcap, and a Willow-Warbler killed against Happisburgh lighthouse (M. Bird).

2nd.—S.W., 4. Four Wheatears† appeared within the precincts of the Castle of Norwich, in the centre of that city.

17th.—A Teal's nest at Westwick, from which the keeper had taken seven eggs, apparently a completed clutch, was comfortably ensconced in heather in a large wood near a lake. The number of Teals' nests in East and North Norfolk is now very small, and the few Garganey which remain are dwindling, but Mr. Bird

knew of one nest for certain. Black Redstart at Brancaster (R. Clarke).

19th.—N.N.E., 4. Mr. Jary saw a pair of birds flying over Breydon, which he thought to be Avocets; and on the same day a White Stork was unfortunately shot at South Wootton, which is close to the Wash ('Field').

22nd.—Five Herons' nests† at Wheatacre, which is five miles from the larger heronry at Reedham, where, Mr. Southwell was told on a recent visit, there were eighty-five nests.

24th.—A "trip" of seven Dotterel on passage seen near Yarmouth (B. Dye).

25th.—A Dunlin, catching mudworms on Breydon flats, was seen by Mr. Patterson to walk several feet down to the water with the worms dangling from between its mandibles, wash them, and return for more.

26th.—Hundreds of Whimbrel on Breydon (G. Jary).

27th.—Some Starlings observed by Mr. Patterson to be hovering over Breydon Broad like Gulls, in order to snatch up black flies which were floating drowned by thousands on the surface.

28th (D.U).—Two Black-winged Stilts and a Red-necked Phalarope on the Broads (M. Bird). These Stilts may have been the birds mistaken for Avocets on the 19th.

30th.—Four Hooded Crows, two of them apparently young ones, on Cromer Lighthouse hills (Birch).

31st.—A Water-Rail passing over the town of Yarmouth struck a telegraph-wire, and fell into a yard; and a fortnight later a Kingfisher was picked up among some houses (Patterson). Such accidents are not very uncommon.

JUNE.

1st.—*Utility of Finches.*—Nearly all my gooseberry-bushes, which were covered over with permanent wire-netting to protect them from birds, have been attacked by the larvæ of *Nematus ribesii*, whilst those outside the netting, which have been exposed to the birds, and consequently cleared of caterpillars by Chaffinches, &c., have borne fruit as usual. It is clearly better to cover the fruit-bushes only for a few weeks in summer, when the fruit is ripening, which I intend to do in future.

4th.—N.E., warm. A pair of Spoonbills were seen by the watcher to fly over Breydon Broad, but not to alight, it being high water, after which they passed out of sight in the usual direction—north-east. These are the only Spoonbills seen during 1905, with the exception of one reported in May at Hickling.

9th.—E.N.E., 6. After five days of continuous north-easterly winds (velocity 5–6), amounting to a gale, an adult Sea-Eagle,† with a good white tail, turned up at Hanworth, some five miles from the coast, where it was speedily peppered with small shot by a too zealous gamekeeper. Norfolk has produced many Sea-Eagles at different times, but an adult has never been recorded before, and an effort has been made to secure the specimen for Norwich Museum. The date of its appearance was also very late, but for this the gale was accountable. Compared with the series in the Museum, its plumage is not very good, being decidedly faded, and the feathers abraded, like a bird which has missed its spring moult. The whole of the tail is white, except the upper tail-coverts, which are edged with brown; the tone of the head is very pale, and the wings from the carpal joint to the body are also pale. Male, proved by the dissection of the late Mr. J. A. Cole, who stuffed it.

12th.—Dabchick's nest with one egg near Twyford (C. Hamond), and another nest with three eggs at Stoke Holy Cross, which has long been an occasional breeding haunt of this species. The accompanying photograph by Mr. E. L. King shows its position, with the eggs uncovered (*cf.* p. 129).

13th.—*Utility of the Barn-Owl.*—A Barn-Owl's tub, put up in an oak-tree to encourage this "farmer's friend," contained on examination a young Starling and a Greenfinch, and the usual collection of pellets. These, being soaked in water and carefully examined, further yielded one Blackbird's skull, eight Sparrows' or Finches' skulls, and the remains of fourteen small Rats, thirteen Shrews, twenty-five Mice, and one Mole. While this testimony to the Barn-Owl's utility was being displayed, there might have been seen a few miles off two keepers' gibbets with Barn-Owls nailed up as vermin, as I am assured by friends who could not be mistaken. A copy of the leaflet on the Barn-Owl, published by the Board of Agriculture and Fisheries (No. 51), was sent in both cases to the head-keeper on the estate, and it is

to be hoped he read it, and realized the ignorance which had allowed him or his assistants to destroy a useful ally. The weird shriek of the quaint bird is not so often heard as formerly, but there are a few landowners who do their best to preserve this useful Mouse-hunter.

14th.—E., 5 (E., 4 the preceding evening). Nine Avocets on Breydon Broad, and seven Sheld-Ducks (Jary). Last year the

Dabchick's Nest.

Avocets came with a north-west wind, but this year with an east wind, which had been blowing from that quarter for ten days. Probably it would be more accurate to say they were delayed in England by this east wind, which prevented their going on to Holland. I believe the same to be the case with Spoonbills when they visit Breydon.

15th.—E.N.E., 4. The Avocets seen again on Breydon muds by Mr. Patterson and Mr. Dye.

16th.—E. The nine Avocets† still on Breydon, all standing on one leg except a single bird, which was perhaps a cripple; but soon some of them began to feed, which they did with great avidity, advancing quickly with eager sweeps, and finally, when disturbed, flying away in a compact flock. When first viewed there was just enough water where they were standing to give their reflections very prettily, together with those of four Black-headed Gulls, which were their only companions. Mr. Hamond and I longed to get near them, but a close approach was not permitted us. Mr. Patterson, who succeeded in getting rather nearer, watched them until the rising tide floated them off their feet, after which they had a lengthy swim, undulating as the moving water passed beneath them. He believes they were feeding on a small univalve (*Hydrobia ulvæ*). The news of their presence soon got abroad, and created some excitement, while that night the watcher had a hard task, as there were two non-respecters of the law in gun-punts following the Avocets about until 11 p.m., when it was too dark to see them; no shot was fired, I am glad to say.

17th.—S.E., 3. The Avocets were last seen in the moonlight at 10 p.m., and were quite visible to the watcher, but he thinks they must have left that night; and Mr. Dye believes they took their departure in a thunderstorm. Next morning the wind had changed to the west.

Cuckoo Notes.—June 22nd. The gardener discovered a Cuckoo's egg in a Hedge-Accentor's nest, deftly built in a currant-bush on our garden-wall. Very likely this egg had been laid by the Cuckoo whose offspring and their proceedings formed the subject of a previous paper (Zool. 1905, p. 164). With the Cuckoo's egg were also two Accentor's eggs, while about ten yards from the nest there lay the blue shell of another broken Accentor's egg, presumably removed by the old Cuckoo, and dropped on the ground. The Cuckoo's egg, being tried in water, was found to be fresh, and, as I concluded it could not hatch for a week, we did not disturb the nest any more.

July 4th.—11 a.m. One Accentor hatched, and the young Cuckoo also. The little Cuckoo is pale flesh-colour, and already

very restless, though probably only about six hours old; it gapes for food, but cannot see.

5th.—9.30 a.m. The young Cuckoo alone in the nest, and the Accentor's egg and nestling both lying on the ground—the egg unbroken and the nestling alive—one foot distant from the wall. As it is a drop of three feet three inches, it is incredible that the egg could have fallen or been thrown out of the nest without breaking; therefore, I suppose both it and the nestling Accentor were lifted out in the feet of the parent Accentor. I at once replaced the young Accentor, and, after waiting quite still for about five minutes, saw the tiny Cuckoo—not yet thirty hours old—edge itself beneath it, and lift it quite to the rim of the nest, which was a rather unusually deep one. It almost got the Accentor over, but, failing to do so, after a few seconds fell back exhausted, and, although I waited some time, it did not try again. The skin of the young Cuckoo is rapidly becoming much darker, and in this short space of time it has doubled its size. Before leaving I also replaced the Accentor's egg in the nest.

Same day.—10.45 a.m. The Accentor's egg is still in the nest, but during my short absence the nestling Accentor has been taken out, and is not to be found anywhere. This is probably the work of the Accentor parent, as no Cuckoo has been seen by the gardeners working near the nest. 6.30 p.m. The Accentor's egg has now been thrown out, and is cracked, which from its position seems to have been done by the young Cuckoo. It was replaced, but the next morning it was found hanging in a branch of the currant-bush, having been for the second time ejected.

JULY.

2nd.—S.W., 3. A White Stork seen by Mr. Patterson on the mud-flats of Breydon; it was very restless, and soon passed on, happily more fortunate than the one at Wootton. Possibly both of them were released or escaped birds.

16th.—Mr. Bird noticed a young Robin in the speckled plumage singing, which is surely unusual.

28th.—A Spotted Redshank and some Greenshank on Breydon (Jary). This is a very early date for the Spotted Redshank.

AUGUST.

23rd.—W., 4. Three Black-tailed Godwits identified on Breydon Broad by Mr. Jary, and many other birds of that class.

25th. — E., 5, cloudy. On the night of the 25th a large number of birds, consisting of Redshanks, Ringed Plovers, Grey Plovers, Lapwings, and Curlew (to judge from their notes), were arrested on their nocturnal migration by the bright glow from the street-lamps of Norwich, and their varied cries were listened to from soon after 9 p.m. until past midnight, and may have gone on until the lights were extinguished. At the same time similar cries, probably intended to keep the birds together, were heard in the darkness over the towns of Yarmouth (A. Patterson), Felixstowe (W. Clarke), Bury St. Edmunds (H. Buxton), Cambridge (Sir L. Jones), and at Beverley (F. Boyes) and Redcar (T. H. Nelson), in Yorkshire. The night was rough and very dark, but in spite of that Mr. Buxton could at intervals plainly see large flocks high in air over Bury, which appeared to be proceeding west, but occasionally dashed down as if attracted by the electric arc-lights in the streets (*cf.* 'Field,' 2, ix. 1905). The wind had risen that evening to force 5, and it may be mentioned that at 6 p.m. the temperature was 67°, 51° for Lowestoft, and 65° for South Lincolnshire. There was a fall of the barometer during the night, and the following morning, when the migrants were presumably winging their way over the English Channel, it was still going down, having at 8 a.m. the coast of Wales for its centre of depression. The circumstance of the birds being heard simultaneously at seven towns, or eight—for Mr. Caton Haigh believes Grimsby may be added—shows the extent of the migration, and that it all lay within the area of depression.

27th.—The gamekeeper at Northrepps disturbed a Honey Buzzard engaged in clearing out a wasps' nest. He refrained from putting down a trap, and the hungry bird, which may have just landed, soon came back, and ate the rest of the grubs. As its demise was not reported it probably escaped, and had probably been brought by easterly gale of the day before. Another, less fortunate, was subsequently trapped at Snettisham (R. Clarke).

29th.—Hobby at Thetford (W. Clarke).

SEPTEMBER. (Prevailing wind W. and N.)

2nd.—N.W. to W., 2. A young Gannet,† a bird of about ten weeks old, caught in a cabbage-field at Weasenham, fifteen miles from the sea (Buxton). I do not remember such a young one being picked up in Norfolk, or anywhere inland before.

4th.—S.W., 1. Two Great Crested Grebes, one of them with a full crest, seen in Blakeney estuary by Mr. Arnold. [Barred Warbler in Lincolnshire, C. Haigh.]

6th.—S.S.E., 2. Two Gannets off Blakeney "bar" (Arnold). Rooks coming inland (Bird).

13th.—S.S.W., 1. From an early hour in the morning continuous flocks of House-Martins were passing Sidestrand and Overstrand under the shelter of the cliffs, and all going W.N.W. This no doubt was a direction taken in order to fly against the wind, which was very light, and it is to be presumed there was a return journey eventually. In five minutes (not consecutive ones) the Martins which passed numbered thirty-two, thirty-seven, sixteen, seventy-three, forty-eight, which would be at the rate of nearly two thousand five hundred an hour. At what o'clock this movement commenced I am not sure, but I was on the cliff at 8 a.m. The "passage" continued until 11.30 a.m., after which it slackened, and at 12.30 had ceased, but I imagine that not less than fifteen thousand Martins had passed; and the Martin is no longer a very common species in East Anglia. The following morning (wind N.) I looked as early as 6 a.m. to see if there were any more, and again at 7, 8, 9, and 10 a.m.; but not a Martin was to be seen; they had all passed, and for five or six days afterwards there were only straggling flocks at rare intervals, while I was on the watch, which was often. Possibly these House-Martins, which were following our Norfolk coast-line, were the same which three days afterwards (Sept. 16th) were seen by Mr. W. Gyngell passing south along the Yorkshire coast in flocks (Zool. 1906, p. 31). They were going in his direction when they passed Overstrand.

19th.—N.W., 1. A Land-Rail on the shore (E. Arnold).

20th.—N.W., 3. Influx of Wheatears; a Red-breasted Fly-catcher identified near the sea by Mr. E. Arnold, who had a good view of it. This is the sixth for Norfolk. In Heligoland it

generally appears with a rather strong N.W. wind (Gätke). [Lesser Grey Shrike at Whitby ('Naturalist,' 1906, p. 70).]

21st.—N.E., 4. A Yellow-breasted Bunting (*Emberiza aureola*, Pall.), immature, and probably a female, shot on the coast close to the shore, where it had most likely arrived that morning, as recorded briefly by Mr. E. C. Arnold (Zool. 1905, p. 466). He noticed its flight to be much more buoyant than that of a Yellowhammer, from which his example chiefly differs in having the lower part of the back streaked. If it had come three days earlier it would have been on the same date as the first Heligoland example. As this is its first detected visit, I am glad to be able to take advantage of the offer of a drawing made of it by Mr. Arnold (*cf.* Plate II.). Its occurrence on the day following the Red-breasted Flycatcher and Lesser Grey Shrike is interesting, probably all of them were from Eastern Europe.

25th.—Eighty-five House-Martins sitting, in heavy rain, on the ledges of my house. I think these birds have been commoner this year, or less persecuted by their arch-enemy, the Sparrow. Two of my correspondents write of large numbers roosting on the reeds of the Broads.

26th.—A good deal of migration reported as the result of yesterday's rain and easterly gale (force 6 at Yarmouth), *viz.* Peregrine Falcon at Fleggburgh (Lowne), Grey Shrike at Sprowston (E. Gurney), Bluethroat at Wells (Gunn), Solitary Snipe at Ringstead, Icterine Warbler at Blakeney, and an arrival of Teal, acceptable to shooters.

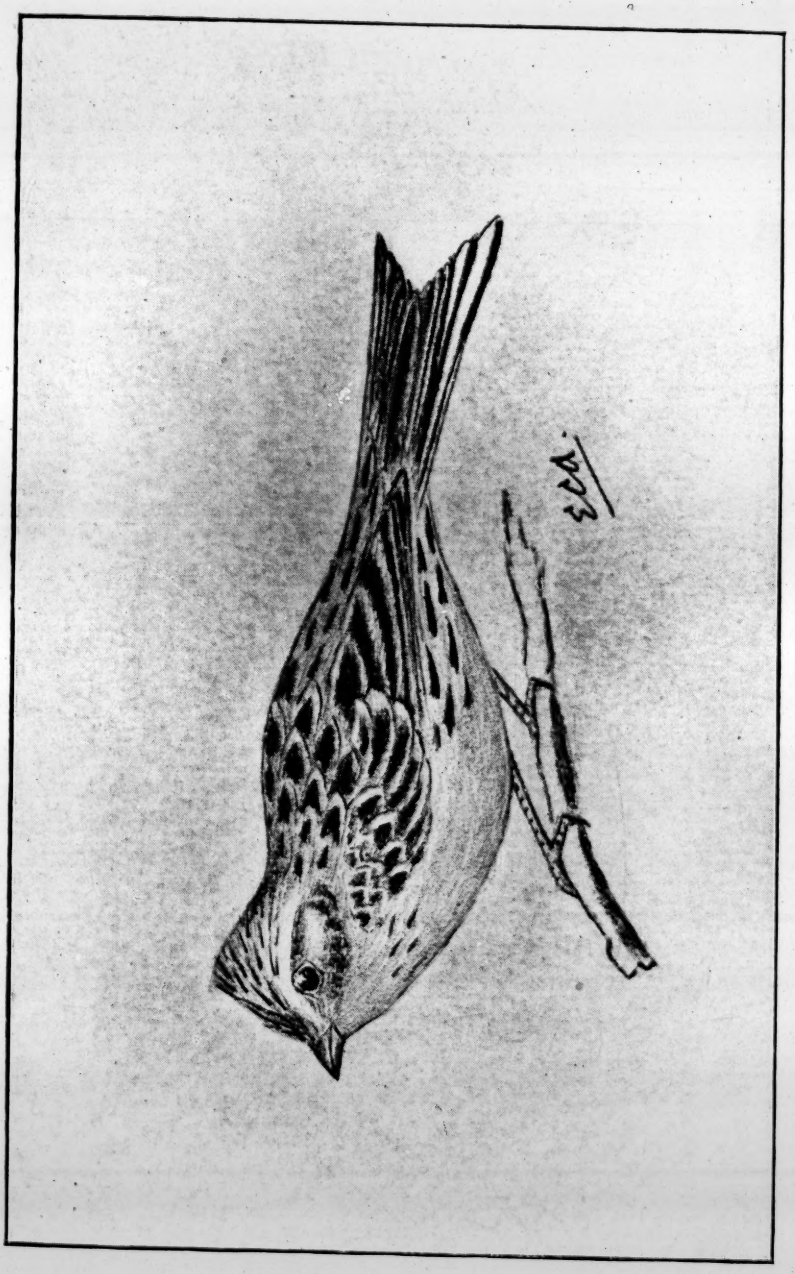
28th.—E.N.E., 3. Mr. Patterson picked up a Manx Shearwater, the result probably of the gale on the 26th, and saw some boys stoning a Red-throated Diver in the breakers; Mr. Dye heard of another Diver. Ring-Ouzel at Northrepps.

30th.—An adult Gannet taken on a farm at Weasenham, within half a mile of where the young one was picked up on Sept. 2nd (Buxton); a high wind the preceding day from N.E.

OCTOBER. (Prevailing wind N.)

1st.—A number of Siskins near Yarmouth (W. Lowne), and, later, a nice quantity at Keswick.

3rd.—Mr. R. Clarke received a Fulmar from Lynn, probably caught or picked up; the only one this year.



YELLOW-BREASTED BUNTING (*Emberiza aureola*, Pall.).

4th.—W.S.W., 5. Eleven Jack-Snipe shot on East Ruston Common (Bird), and a Fork-tailed Petrel caught on a fishing-boat (Lowne).

5th.—Grey Phalarope on Breydon (Patterson). Quail at Lopham (Rev. J. Sawbridge).

6th.—A young Red-necked Phalarope† shot on a pond at St. Faith's (Roberts). Received an adult Gannet† from Holme, which I believe was found alive on the shore. Mr. R. Clarke had another at the same time from Congham, and also heard of a young one being washed ashore.

7th.—Several Sky-Larks struck Happisburgh Lighthouse, and the following day four Goldcrests and some Starlings (Bird).

8th.—A Storm-Petrel flew on board a "lugger" (Patterson).

9th, 10th, 11th.—Many Grey Crows coming in (Bird). The hedgerows in South Lincolnshire teeming with Blackbirds, Thrushes, Redwings, Tree-Sparrows, Chaffinches, Bramblings, &c. (F. Boyes, 'Field'). Quail shot at Tunstead.

12th.—Received from Mr. Patterson a young Guillemot,† which had been hooked from Gorleston Pier, but I could not induce it to feed, and it soon died. Storm-Petrel caught on a fishing-boat (Lowne).

15th.—*Utility of Starlings.* Large flocks of young Starlings about, which later on were very busy on the wheat-fields, apparently attacking the blade wherever it had appeared above ground; but in reality what they are after is the wireworm lurking at the root of the wheat, which is a very small grub when young. The only harm that Starlings do is the loosening of the plant itself, thereby letting in drought or frost. Starlings have a curious habit of pecking with their mandibles apart, and this, I think, must help to loosen the wheat-plant. On the whole they do much more good than harm, but they are not above helping themselves to whiteheart cherries. I cannot so readily acquit the Rooks, which in September were carrying off walnuts at Cringleford in a provoking way, and later on were to be seen in great flocks on newly-sown wheat, where they were not wanted. Many of our farmers would not be sorry if the Act of Henry VIII. for their destruction was in force again. It must be confessed, however, that they take a great many wireworms and grubs of all sorts.

16th.—N., 2. Numerous flocks of Herring-Gulls† passed over Northrepps, going north; in fifteen minutes about five hundred passed, travelling against the wind. Drake Shoveler† on the pond at Stratton.

17th.—W.N.W., 4. A Woodcock† flew into a blacksmith's shop in the middle of Cromer about 2 p.m. The forge has a large door which faces in the direction of the sea, but there are many houses over which the Woodcock must have passed before descending into the street.

22nd.—Glaucous Gull shot on Breydon Broad ('Field'). I learn from Mr. E. Saunders that this Gull is in the white plumage, a transition stage which has occurred on the Norfolk coast before, but which is decidedly rare. Mr. Dye was informed that it had frequented the south beach for a fortnight. It has been the only Glaucous Gull in Norfolk during 1905, but an Iceland Gull is reported from Cley.

28th.—A Storm-Petrel taken on a fishing-boat (E. Saunders).

November. (Prevailing wind S. and W.)

1st.—During the autumn Bearded Tits were repeatedly seen by Mr. Barclay at Hoveton, where they are safe, and small roving parties were met with at Belton (Buxton), and Beccles (Patterson). But their breeding area is so small that their total number must be very limited, and it is desirable that all protection should be extended to them. Probably the total hatch would not exceed sixty broods, and they now breed nowhere else in England.

3rd.—A Storm-Petrel allowed itself to be caught on or by a fishing-boat (Patterson), the fifth caught in this manner. Spotted Rail at Catfield (Bird).

5th.—Several late Sand-Martins still at Cromer (F. Barclay).

8th.—Sharp frost. A Sand-Martin† picked up by my son.

9th.—Swallow† at Trowse. A Little Owl captured at Kelling (Pashley), doubtless one of the many turned out. Mr. Pashley says there was another with it.

10th.—Ringed Guillemot at Yarmouth (Patterson), where about this time two Lapland Buntings were seen (B. Dye), and some more (D.U.) at Blakeney.

W.N.W., 2. At about 6.30 a.m., by a strange coincidence, a

second Woodcock flew into the same forge where one was taken on Oct. 17th, both of them having chosen exactly the same line, and entered by the same doorway, which, it is true, is wide. For two to have taken exactly the same line of flight seems rather singular, but the wind was in both cases the same. Another flew into the railway station. They were all three caught, and the two in the forge were taken alive to Mr. Barclay, who gave me one of them, but I was not very successful with it. On the same day continuous flocks of Fieldfares were seen by Mr. Caton Haigh arriving in North Lincolnshire, their "passage" lasting from daylight until the afternoon, but it probably began long before daybreak.

13th. — Bittern "booming" at Catfield, and quantities of Jackdaws arriving about this date (Bird). The Bittern's "booming" is generally considered to be a spring cry.

14th.—E.N.E. Three Martins at Keswick, one scarcely full-grown. November Martins are of such annual occurrence as to excite but little comment; probably it is in consequence of so many of their earlier nests being usurped by Sparrows, which make their broods very late.

19th.—E., 6. Female Eider-Duck picked up in a meadow near Downham Market (W. Clarke), no doubt carried inland by the high wind.

23rd.—Swallows at Raveningham (Gray).

December.

9th.—Shoveler near Yarmouth (Dye).

13th.—Pied Wagtail at Keswick.

15th.—W. A Dartford Warbler, which has always been a rare bird in Norfolk, on the sea-bank at Wells (A. Napier).

19th.—S.S.W., 4. An arrival last night apparently of Woodcocks, Snipe, and Jack-Snipe. A few days afterwards (D.U.) forty-two Woodcocks were killed at Haverland, the best bag of the season. It is marvellous how their numbers keep up, for there is no bird in Europe so persecuted; from two thousand to four thousand are usually killed in Norfolk every year. There is an idea that when they arrive they are very thin, but as a matter of fact the reverse is generally the case.

21st.—Grey Shrike seen at Swaffham (W. Clarke).

26th.—Norfolk Plover at Ridlington (C. Gurney); an even later one than that recorded last year.

The year 1905 has passed without the record of a single Wild Swan; neither has the Waxwing shown itself, without which a winter seldom passes.

VARIETIES.

Notices have been handed in of the following varieties:—

Jan. 3*rd.*—Pied Sky-Lark at Runham (Lowne). 7*th.* Yellow-hammer† with canary-coloured head and wings of the same at Booton (Cole). ?18*th.* Tawny Moorhen† at Bury (J. Tuck); young bird without frontal shield or garter; plumage of the usual hair-like texture (*cf.* Norwich Nat. Trans. iii. 581; plate of this variety). 30*th.* Pied Moorhen† at Mautby; feathers of the usual texture (Roberts).

February.—A white Moorhen at Stoke Ferry (W. Clarke).

April.—Cock and hen pied Blackbirds seen at Ingham (R. Gurney).

August.—A white Sand-Martin sent to Norwich (Roberts). Pied Wheatear (D.U.) near Thetford. White Swallow at Sheringham.

September.—White Hedge-Accentor at Stoke (E. Gunn).

October.—White-winged Partridge and white-winged Rook (B. Dye).

November.—French Partridge with white breast at Barningham (Barclay). Pied Chaffinch at Fleggburgh.

ROUGH NOTES ON DERBYSHIRE ORNITHOLOGY, 1904–1905.

By the Rev. Francis C. R. Jourdain, M.A., M.B.O.U.

(Continued from 'The Zoologist,' 1905, p. 62.)

1904.

Addendum.—Mr. A. F. Adsetts informs me that a Little Auk, *Mergulus alle* (L.), was shot on the River Trent, near Donington Park, on Nov. 24th, 1904, by a keeper named Hallett. Some six or seven specimens have been previously recorded for the county.

1905.

From Jan. 16th to 28th the weather was very severe, and the thermometer fell several times nearly to zero. The 16th was an especially bitter day, for, although no snow fell till night, a piercingly cold wind was blowing all day. Most birds suffered much during this time, but the Dippers were apparently quite indifferent to the cold, and were singing merrily on Jan. 26th. On March 12th bees were noticed at work for the first time.

Of late years the Stonechat (*Pratincola rubicola*) has become a very scarce visitor to the county, and it was with much pleasure that I recognized a hen bird perched on a dead thistle close to the River Dove, near Rocester, on March 13th. Curiously enough, a cock bird was observed at Thorpe, eight or nine miles higher up the Dove Valley, on the 18th. As a rule, our summer migrants hardly ever put in an appearance before the first days of April, but on March 20th two Sand-Martins were noticed at the cutting just above Clifton Station, where many of these birds breed, and a week later about a dozen birds were to be seen there; but the main body did not arrive till the 30th. On the 18th Wrens were busy building their nest by the roadside at Clifton, and a nest of young Thrushes was found in an evergreen hedge at Stramshall (Staffordshire) on March 31st. Even these were not the earliest nests of the season, for Mr. W. T. Mynors came across a nest of the Brown Owl which contained young in down on Feb. 23rd, while another was found with one young

bird and an addled egg on the 19th, quite a month earlier than the usual laying-time of this species!

On March 25th three Sandpipers were noticed at Repton by Mr. J. E. C. Godber, and about March 27th the Wheatears returned to their breeding haunts on Thorpe Cloud. A Dipper's nest at Ilam had four eggs on March 27th, and another at Sturston contained fledged young on April 12th. By April 4th Wild Duck, Blackbird, Robin, and Thrush had laid, and several Mistle-Thrushes were sitting. Several small flocks of Goldfinches were reported from the Ashburne district about this time, and on April 10th six large Gulls (sp. ?) were seen flying eastward over Clifton about 7 p.m.

On May 22nd we had a very sharp frost in the morning, which killed all the foliage on the copper-beeches, and seriously injured many of the ashes, chestnuts, and beeches in the neighbourhood of water. Owing to the provision of nesting-boxes the Great Tits have increased in numbers in this village, and four or five pairs now haunt my garden. A hollow oak, which has occasionally been inhabited by Brown Owls, and frequently by White Owls, contained five eggs of the latter species on May 26th. An extraordinary Blackbird's nest was placed on the ground in the middle of a small clump of rushes, right out in the middle of a pasture-field. The eggs might have passed for rather lightly-marked Thrush's eggs. A Nightingale was heard for two nights (May 22nd–23rd) at Thorpe Rough, but apparently moved on, for it was not noticed subsequently. The two Merlins' nests found on the North Derbyshire moors have already been recorded in these pages (Zool. 1905, p. 267). Mr. C. E. B. Bowles also informs me that a single Merlin was noticed by his son on Abney Moor this year.

A good deal of timber has been felled lately in the Ramsor Woods, and the Great Spotted Woodpeckers seem to have deserted the locality. However, we found another pair breeding in a dead and very rotten tree in a hanging wood not far from Dovedale. This year's nest-hole was about thirty-five feet from the ground, and above it were the remains of two older nests. On June 6th the six eggs in the lowest nest were perfectly fresh. Mr. Storrs Fox states that a young bird was brought alive to him on June 25th from Manners Wood, near Bakewell.

The White Owl's nest, which contained eggs in May, was again utilized for a second brood in July (six eggs), and later in the month a Nightjar's nest with two eggs was found while cutting bracken near Wootton, Staffordshire. At Osmaston Manor the Great Crested Grebes successfully brought off a brood of four young.

On the whole the weather of the summer and autumn of 1905 was extraordinarily fine and dry. From many parts of England reports of the exceptionally late stay of both Swifts and *Hirundinidæ* were received. Most of our local Swifts had disappeared by the middle of August, but on the 24th Mr. A. Evans saw one go into a nesting-hole at Rocester; and on Sept. 3rd I saw one hawking about, together with a number of Martins and Swallows, near Bradbourne Mill.

The House-Martins, as usual, were still feeding their young long after the young Swallows and Sand-Martins had left the nest. Mr. G. Pullen noticed a single Swallow at Darley on Nov. 6th, and several were seen at Repton about the same time. The most remarkable note on the subject reaches us from Burton, where Mr. H. G. Tomlinson reports that a single House-Martin flew out of an old nest which was being knocked down on Nov. 25th!

A new species was added to our county fauna on Sept. 30th, when Mr. Herbert Tomlinson shot a fine Curlew-Sandpiper (*Tringa subarquata*) on the sewage-farm near Egginton, from whence so many scarce birds have been recorded. Another bird of the same species was also seen, but not shot. The specimen has been preserved, and is in Mr. Tomlinson's possession; it is apparently a bird of the year. The number of species definitely recorded for Derbyshire, excluding those which are believed to have been artificially introduced, now stands at two hundred and thirty-five. Another interesting visitor, which was shot on the same day and at the same place as the Curlew-Sandpiper, was the Little Stint (*Tringa minuta*). Only one of the two previous records can be regarded as satisfactory, so that this is the second definite record of the species for the county.*

On Nov. 4th an enormous white bird was seen flying over the Derwent Valley, near Little Eaton. It was apparently attracted

* A Green Sandpiper (*Totanus ochropus*) was killed by Mr. R. G. Tomlinson on the sewage-farm early in September.

by the sight of the water, and settled in a field close to the river, causing a stampede among the cattle and sheep grazing in the meadows. A local innkeeper, Mr. S. Stevens, stalked and shot the bird, which turned out to be a fine male White Pelican (*Pelecanus onocrotalus*). According to the local papers, it measured twelve feet in expanse of wing, and weighed fifty pounds. I saw it in Mr. Hutchinson's shop, and the plumage was clean and in good order, and, as the nearest place where these birds are kept in captivity is at least fifty miles away, it must have possessed considerable powers of flight. Up to the present no information as to the escape of any captive bird has reached us.*

After high winds on the preceding day a very large flock of Gulls visited the Dove Valley, and rested for a short time in the meadows above Okeover on Nov. 27th. Mr. J. Henderson, who estimated the number of the flock at one hundred and fifty at least, believed that most of them were Herring-Gulls (*L. argentatus*). The same observer also informs me that a pair or two of Nuthatches are to be found in Okeover Park.†

Possibly the herd of Bewick's Swans (*C. bewicki*, Yarr.), which visited this district in 1904 (Zool. 1905, p. 58), may have returned in 1905, for on a Sunday afternoon early in December (probably Dec. 3rd) Mr. J. E. C. Godber and a friend heard in the distance loud trumpeting notes, and soon afterwards nineteen Swans came into sight, crossing the Trent near Willington, and flying northward. An interesting feature of the last few seasons has been the decided increase in the number of Herons, which are now quite a feature on the upper part of the Dove Valley, and in that of the Manifold. These birds seem to have benefited by the protection orders, and are certainly more numerous now than formerly.

* It is perhaps worth noting that the White Pelican has recently been recorded from Bavaria in a wild state, as well as the Flamingo, which is admitted to the British list by Mr. Howard Saunders on somewhat similar evidence to the above.

† He also informs me that he had a good view of a Black Rat, not a melanistic Water-Vole, but a long-tailed animal with pointed head, by a small barn not far from Hanging Bridge. We have no properly authenticated instance of the occurrence of *Mus rattus* in the county, though probably at one time it was common.

ICHTHYOLOGY IN JAPAN. (ECONOMIC SPECIES.)

By Prof. McIntosh, M.D., LL.D., F.R.S., &c.

The second part of the popular account of the Economic Fishes of Japan, by Messrs. Otaki, Fujita, and Higurashi,* contains a description of five edible fishes, viz. *Scombrops cheilodipteroides*, Blk., the Mutsu; *Scomber colias*, Gmel., the Speckled Mackerel; *Trachurus japonicus*, T. & S., the Maaji; *Decapterus muroadsi*, T. & S., the Muroadsi; and *Paralichthys olivaceus*, T. & S., the Hiramé (proper).

Four imperial quarto coloured plates accompany the text, one containing two figures, and all are exquisite representations, apparently from life, by the same artist, Kumataro Ito.

The first fish in the present part is *Scombrops cheilodipteroides* —the Mutsu—one of the *Percidæ*, an edible fish of some size, which abounds on the Pacific shores of Japan, has pelagic eggs —spawned in January and February, when it comes to shallower water from its usual haunts in two to three hundred fathoms on rocky or sandy ground. Like the young Cod, the young Mutsus are found swimming off the rocks in three or four fathoms, and are supposed to attain maturity in three or four years. It is used chiefly in the fresh state, and its roe is also much esteemed.

The "Spanish" or Speckled Mackerel (*Scomber colias*), which recently was included in the able Report on the Japanese and European Mackerels, by Prof. Kishinouye,† forms a very important fishery with nets and lines along the south-eastern coast, finely chopped Squids or Shrimps being thrown into the water to allure the fishes. In dark nights also torches are employed in the boats. The food of the species consists of a great variety of pelagic invertebrate animals, and has been carefully investigated by Prof. Kishinouye. The wide distribution of the Mackerels is a feature of both interest and importance.

* No 2, vol. i. Shokwabo, publisher, Nihonbashi, Tokyo, Japan.

† 'Rept. Imper. Fisheries Bureau,' No. v. vol. ii. 1894.

Trachurus japonicus—the Maaji—among the Horse-Mackerels (*Carangidæ*), is another food-fish, used either fresh or dried. It would therefore appear to be superior to the Scad or Horse-Mackerel of our shores, which is but rarely used as food, though from the days of Pennant it has been "firm and well tasted," especially when it reaches the shores and estuaries in spring.

The Muroadsi (*Decapterus muroadsi*), a closely allied form, is very common, frequenting the warm currents in shoals from May, its spawning season till October, and near the shores.

Paralichthys olivaceus—the Huramé—a flat-fish (Pluronectid) of some size (83 cm.); indeed, it is exceeded only by the Ohio (*Hippoglossoides*). It is a valued food both in the fresh and dried condition. Before spawning it comes into shallower water (five fathoms), and is ripe in May and June, the female having about two million pelagic eggs with an oil globule. It is stated to become mature in about five years, and that the sexes can be distinguished by the position of their genital openings, a feature sometimes overlooked in the fishes of our own country. It appears that the catch of this fish has been increasing since 1899, and the fishery is carried out on or near sand-banks, and with trawl and gill-nets. Hooks are, however, used in water of thirty fathoms, and the usual bait is "brined" sardines.

This part contains, like the former, a series of illustrations of the apparatus and methods of fishing of the Japanese—such as sheet-nets for capturing fishes in shoals; lines with attached wire-cage near the sinker, as a lure, so that the fishes are attracted first and then captured by the hooks; besides figures of lines and hooks, the methods of setting, and boats at work near the coast.

The excellent character of the work is maintained in this part both as regards text and illustrations.

THE FLIGHT OF FLYING FISH.

By Lionel E. Adams, B.A.

One would think that the method of flight in Flying Fish had been the subject of observation sufficiently long to enable naturalists to come to some definite opinion thereon, especially as the phenomenon is of such common occurrence in tropical and subtropical waters. We find in the 'Royal Natural History,' vol. v. p. 402, the editor's summing up of the question as follows: It is "well ascertained that the continuance of the flight is due to the original impetus of the leap from the water, and is not prolonged by the flapping of the fins." This statement is thus qualified further on: "From my own observation I am, however, of opinion that the pectoral fins are vibrated rapidly on first leaving the water for a few seconds, doubtless from a continuation of the swimming motion while in the water, after which they become entirely motionless," the writer suggesting that this vibration is due to the continuance of the action initiated while the fish was still immersed, and that this movement does not assist the flight.

After this pronouncement from so high an authority I should not venture to trouble you on the subject, if the evidence of my own repeated and often prolonged observation did not differ materially from what has just been quoted.

One rarely has the opportunity to observe adult Flying Fish swim, as they are very shy of a boat; but I have often picked up fish just as they have come on board, and put them into a bath to study their movements. When in the water they never use their wings (I use the term "wings" for convenience) to swim with, but hold them close to their sides; the tail, however, vibrates, sending them with a rush against the side of the bath, which generally stuns them, and they never recover; but I have noticed that if their rush takes them along the length of the bath, and they have room to show an attempt to rise from the

water, they only begin to spread their wings just as they are about to leave the surface. The shoals of fry that one often passes through seem to flap their wings in abortive attempts to rise, but to swim with the tail alone. I think, as a rule, that most fish of all sorts use the tail and not the pectorals when swimming fast, but when swimming slowly the pectorals are slightly employed, and then more as guides and checks than as propellers.

Dr. Möbius, quoted on the same page (*loc. cit.* p. 402), says: "Flying Fish often fall on board vessels, but this never happens during a calm, or from the lee-side." I have, though rarely, known Flying Fish come on board in a calm at night, when they fly at the lights, but in rough weather I have known them come on board from both sides alike.

In 1882 I had special opportunities for watching the flight closely, and I give the substance of notes made at the time. It was on the way home from the Persian Gulf in a tramp steamer, and we had to face an exceptionally heavy south-west monsoon from Maskat to Aden, especially after rounding Ras al Had. We battled for nearly a fortnight amid waves like hills that kept piling up against us, and out of these waves shoals of Flying Fish used to start like flocks of Starlings. These shoals used to fly all day at short intervals quite close to the ship, and very frequently across it, within a yard of my position, and I was often able to see them against the sky. Once, after dark, one struck me on the back—a somewhat severe blow. Often they would strike the rigging and fall down, when they were eagerly snapped up for next morning's breakfast. I used to watch them for hours as they kept flying past, and I could see quite distinctly that their tails were vibrating very rapidly from side to side during the whole of the flight, and that the wings would vibrate with an intensely rapid shivering motion for a second, then remain outspread motionless for one or two seconds, and then vibrate again. This vibration of the wings is not up and down as is the case when birds fly, but in an almost horizontal direction. Often, however, the period of soaring with motionless wings appears longer than two seconds, especially towards the end of the flight, just before they fall into the water with a splash, though the vibration of the tail always continues throughout the

entire flight, the whole flight being performed very much like that of the Starling as far as the wings are concerned.

Since making the foregoing observations in the Arabian Sea I have had numerous opportunities of watching Flying Fish in various parts of the world, and all my observations confirm my first impressions.

As to the length of the flight, the following from my personal observations noted on the spot may be taken as not excessive. The longest flight of which I have a record is from Sunda Straits, where the fish run large, it was "quite three hundred yards, often with several dips of the tail, and changes of direction." I have notes from Perim to Pulo Wey of flights of two hundred yards. In the Mediterranean, along the Algerian coast, where the fish run small, one hundred and fifty yards is a long flight. In the Adriatic, where I have seen them as far north as Poma Island, one hundred yards is a long flight. In the Atlantic, south of the Newfoundland Banks, two hundred yards is not an uncommon flight. I think the length of the flight is alone sufficient to refute the possibility of its consummation without the initial velocity being renewed. One theory is that they keep up the flight by going against the wind, soaring like sea-birds; but, as a fact, the fish will start off in all directions from the bows of a vessel, or when chased out of the water by enemies—as often in a calm as in rough weather, against, across, or before the wind, and, as I have mentioned above, will often change the direction of their flight, which is done by touching the water with the lower tip of the vibrating tail. I once spent the greater part of a distinctly warm afternoon, in a dead calm in the Gulf of Aden, watching schools of the Sailors' Dolphins (*Coryphæna*) bounding out of the water, chasing the Flying Fish as greyhounds course hares; and, to complete the similarity, the Flying Fish would dodge in the manner described—by touching the surface with the tail—often almost at a right angle, thus letting the pursuing enemy shoot past. Now, imagine what impetus would be necessary to start the heavy body of a fish on a flight of two hundred yards to be maintained by soaring alone, in any direction to the wind, or in a dead calm, the direction changing two or three times, and often following the undulating surface of the waves! By the way, it is always in a dead calm when the longest flights occur.

I am perfectly well aware that a casual glance at Flying Fish from the lofty deck of a liner gives the impression that they soar like birds with motionless wings, but watch them at close quarters from the deck of a low-waisted tramp, and the vibratory motions of tail and fins will be quite plain.

It is truly amazing to contemplate the countless millions of these fish in tropical waters. Often for weeks together one may every few minutes see startled shoals scatter from the ship's bows. I have watched for hours the sea thick with myriads of juveniles from a couple of inches in length. These do not fly, but flap on the surface; the flight begins when the fish are about three or four inches long, and increases in length as their size increases. The adults come on board chiefly at night, and mostly in rough weather. As I have said, they are often collected and fried for breakfast. The flesh is very white and firm, but somewhat dry, and the bones are particularly hard; but after living on "salt horse" and tinned tripe one regards them as a distinct relief. Fishermen bring them for sale to ships in the Japanese ports, but I have never seen them in the fish-shops there.

Of course, for anything I know, different species may have slightly different methods of flight; indeed, I am inclined to think they have. I have a note made fifty miles south-east of Cape Race to the effect that the Flying Fish appeared to have four wings. As I was watching them through a glass a fellow-passenger, to whom Flying Fish were familiar, came up, asking me if I had seen four-winged Flying Fish before. I never had, but I have thought since that these must have been of a species with large ventral fins, which may be spread in flight.

NOTES AND QUERIES.

AVES.

Fire-crested Wren in Dorset.—On March 28th a Fire-crest (*Regulus ignicapillus*) was seen near Charmouth, flitting about the base of a hedge by the River Char, three hundred yards from the seashore. A strong north-east wind was blowing, but the afternoon sun shone warmly on the sheltered side of the hedge, where six or eight Chiffchaffs were also disporting themselves; they were constantly fluttering in the air after flies, and occasionally uttered a few notes of their simple song, but in such weak tones as to suggest they had recently arrived on our coasts. A Golden Crest appeared for a time about the same bushes, and once or twice made a dart at the Fire-crest, when the difference in the plumage of the two birds was strikingly contrasted, the black line through the eye of the Fire-crest and the bright yellow-green of its shoulders giving it a distinguished appearance. We watched the bird through our telescopes at a distance of ten yards for about twenty minutes. It is the first time we have seen it in this country, though we are familiar with it in the woods around Baden-Baden.—G. Lister (Lyme Regis, Dorset).

Fire-crest near Tunbridge Wells.—On March 3rd, near Tunbridge Wells (in Kent), I saw a small bird in a place where Gold-crests have been fairly numerous this winter, which I supposed to be of that species; however, it approached so near that I was able to see distinctly the black eye-stripe and white eyebrow which are characteristic of the Fire-crest. Since then several others, including a well-known local ornithologist, as well as myself, have several times observed this bird, and a second—no doubt its mate—has also been seen.—H. G. Alexander (3, Mayfield Road, Tunbridge Wells).

Continental Long-tailed Tit in Yorkshire.—Near Kirkham Abbey, in Yorkshire, on March 18th, 1905, I saw a Long-tailed Tit, of which I obtained an exceptionally near view, enabling me clearly to see that it entirely lacked the black line over the eye, the whole head being pure white. It was in company with birds of the ordinary British type.—H. G. Alexander (3, Mayfield Road, Tunbridge Wells).

The Breeding Range of the Twite.—I shall esteem it a favour if Mr. E. P. Butterfield will justify his remarks in the last issue of 'The Zoologist' (*ante*, p. 112) by pointing out where I have stated that the Twite is "generally distributed" in any part of the British Islands. The statement that this bird "breeds in most parts of the British Islands where moors, mountains, and exposed heathy places are found" seems to me to be a sufficiently broad and indefinite one, and fairly to represent the distribution of this species in the nesting season. I have nowhere asserted that it breeds on all moorlands, nor even in all parts of the country where moors, mountains, &c., are found. A reference to my first note (Zool. 1905, p. 390) will show that after making the general statement I proceeded to point out exceptions and limitations, one of these being that the bird is much less common on the eastern side of our islands than on the western; and it is curious that Mr. Butterfield should fail to see that his want of success in searching for this bird on the moors near Whitby is a mere illustration of what I have just said. If Mr. Butterfield was acquainted with the West of Ireland he would probably know of districts there where Twites are far more common than in Yorkshire. Future researches and closer scrutiny may reveal this bird as occasionally nesting even in parts of the country where it it has been declared not to breed. It is difficult to prove a negative, and the Twite is a species which is both sporadic and local. I did use the words "wide distribution" (*ante*, p. 29) in speaking of this bird's range, some dim recollection of which may have been in Mr. Butterfield's mind. But this expression has a different meaning from "generally distributed," and would seem particularly appropriate to a species which breeds in various localities from the Shetlands to Kerry, and from the Outer Hebrides and Donegal to Derbyshire and Devonshire. Surveying Britain as a whole, we may find considerable tracts of country in which the Chaffinch, the Blackbird, the Robin, and the Rook do not breed; yet it would be pedantry to object to the statement that these are widely and even generally distributed species.—ALLAN ELLISON (Watton-at-Stone, Herts).

The Geese of Europe and Asia.—In the review of Alphéraky's "The Geese of Europe and Asia" (*ante*, p. 118), an impression of the reviewer appears to me to be somewhat misleading. At the commencement it is stated that the author of the book "is not disposed to lay too much dependence on the dimensions of the bill as a specific character, and which he regards as largely dependent on age, and also practises the greatest caution in using the colouring of the bill for the same purpose." From my careful reading of the book the reverse is

certainly the case; if not so, upon what characters does Alphéraky depend for establishing the numerous new species, such as *Anser arvensis*, *A. neglectus*, *A. arvensis sibiricus*, &c., &c.? As to the specific validity of *A. gambeli*, it may be noted that in a note on page 42, at the commencement of his article on the White-fronted Goose, Alphéraky refuses to recognize *A. gambeli* as a species; on page 57 he admits the large size of the bills of my birds, but erroneously gives my largest measurement as 2·0 instead of 2·24—I have since secured larger ones—but on page 56 he makes the curious assertion that I have not measured my bills correctly, that I must have measured round the curve of the nail instead of taking a straight line! This is wrong. For measuring my bills I use best quality fine steel tryers and steel measure, and do not—cannot with tryers—go round the curve of nail, but take a straight line from base of bill to end of nail. If I adopted the practice of some ornithologists, and put the point of the tryers amongst the feathers at base of bill, I could very nearly reach the maximum 2·35 of American measurements. To return to the question of *A. gambeli*. Since the publication of my paper in 1902, I have secured specimens to fill all gaps, which now make my series of this bird a perfectly complete one. In all the new specimens the extra length of neck as compared with *A. albifrons* was unvarying. This important character is utterly ignored by Alphéraky! As to that author's supposition that my specimens may not be identical with American birds, I may state that on my return journey from my recent expedition to Central British Columbia, I visited the United States, and examined all specimens of *A. gambeli* in museums from Victoria, British Columbia, through the chief cities of Canada to New York, where at the National Museum, through the kindness of Dr. Allen and his courteous assistant, Mr. Miller, I was enabled to study the entire series of this bird, and had no difficulty whatever in determining the whole as being referable to *A. gambeli*, and identical in all important characters with my series of birds. I did not find a specimen on any portion of the American continent I visited that I could have referred to *A. albifrons*. On the question of the translation of Dr. Radde's description of the colours of bill in *A. rubrirostris*, there is a footnote on page 49 stating that Radde referred to "the bright rufous-coloured *feathers* at base of bill." Whatever Radde did say, or intended to say, is beside the fact that there *is* a rusty red semicircular band at base of *bill*, not the *feathers*, in this bird, which can be seen only in the living or freshly killed specimens. It is clear that Alphéraky has never seen such. Mr. Stuart Baker has studied living specimens of this bird in the market at Calcutta, and instantly recognized this rusty-red band when

he examined one of my birds. Surely nothing more need be said on this much-debated question. Mr. Alphéraky, on page 57, expresses regret that he had not time to communicate with Mr. Gurney and myself. I share that regret, for it would have given me the greatest pleasure to have co-operated with him, and I think a little friendly interchange of views might have removed what appear to me to be blemishes in an otherwise excellent book.—F. Coburn (7, Holloway Head, Birmingham).

[Anyone perusing pp. 3 and 4 of Alphéraky's book must certainly be in no doubt as to that writer's emphatic opinion on the little reliance to be placed on the length and colouring of the bill as a specific character. Whether he has been consistent in these views throughout his book is a matter which Mr. Coburn evidently questions.—The Reviewer.]

Avocet near Rye. — On March 21st, near Rye, I saw an Avocet. Others have seen it since with me, at the same place, and we have been able to get near enough to see its curved bill and blue legs quite clearly. When settled it looked quite white at a little distance, except for the black on the head. It flew with its legs stretched out behind, and then the black on the wings gave it a pied appearance.—H. G. Alexander (3, Mayfield Road, Tunbridge Wells).

Knot (Tringa canutus) in Wiltshire.—As the Rev. A. C. Smith, in 'The Birds of Wiltshire,' only mentions three instances of the occurrence of this bird in Wiltshire, it may be worth recording that on Feb. 27th last I caught a Knot (female) in a field about half a mile from Salisbury. It had lost part of one wing, no doubt from flying against a telegraph-wire, and was very thin and weak. — Arthur Bankes (Leadenhall, The Close, Salisbury).

Great Skua at the Færoes.—In the last issue of 'The Zoologist' (pp. 81 *et seq.*) I read that two English collecting ornithologists visited the Færoes in the summer of 1905, and on one of the southern islands they found the eggs of three pairs of the Great Skua (*Stercorarius catarrhactes*). It would be right, I think, to inform your readers that the few remaining Great Skuas have been fully protected by Act of the Danish Parliament of Dec. 18th, 1897, renewed in 1903; so that no collecting is allowed. The inhabitants of the Færoes deserve great praise for having done their best to preserve these magnificent birds on their islands; it would be a pity if their efforts should be frustrated. In spite of all protection the number of breeding Skuas diminished considerably from 1897 to 1903.—Herluf Winge (Vice-Inspector at the Zool. Museum, Copenhagen).

Ornithological Notes from Lewes.—A Chiffchaff spent March 9th in the hedges near this rectory; it then disappeared, and I saw no other till March 23rd. Every winter for the last five years a pair of Grey Wagtails have taken up their quarters along a tiny ditch near the rectory; this year I saw them last on March 14th. The vast flocks of Starlings which have roosted in our woods broke up this nest. I noticed that the resident Starlings roosted about the farms, &c., as usual, and never seemed to mix with the aliens. On May 2nd, 1901, at the edge of Blunts Wood, in this parish, I watch from a very short distance a bird which at the time I thought, from the description in Saunders's 'Manual,' to be a Woodchat Shrike. I have recently seen the specimens of that bird in the Museums at South Kensington and Brighton (Booth), and am now absolutely convinced that I was right. I took a careful note of this at the time, and spent most of the morning watching it. The ordinary Red-backed Shrike is quite common here.—Clifford Toogood (Barcombe, Lewes, Sussex).

Some Notes on Birds of Donegal.—In 1905, Mr. Theed Pearse and myself spent the latter end of May and first few days in June visiting the locality around Narain. In 'The Zoologist,' 1892 (pp. 128–131), I made some notes on the birds observed in this district, and it will not be uninteresting to compare and add to such after a lapse of fourteen years.

Whinchat.—Carefully sought for in a former nesting haunt, but found absent.

Goldfinch.—Apparently not nearly so plentiful.

Raven.—A pair have nested for several years after an absence of many previous years. This year the young flew from a nest in Scoultaling, near Dunmore Head.

Hooded Crow.—Nested previously, but not met with in its former haunts.

Jackdaw.—Numbers nesting on the headlands.

Water-Rail.—Two seen on the Sheskinmore, probably birds of different pairs. One evidently had young, as it became very excited at my approach, and refused to leave the vicinity of a small patch of rushes.

Lapwing.—A pair nesting on Roaninish Islands.

Dunlin.—Some half-dozen or more pairs nesting on the Sheskinmore, and several were heard uttering their love-call on Roaninish.

Redshank.—One pair and their eggs found on the Sheskinmore.

Purple Sandpiper. — One picked up dead on Inishbarnog, and another seen at Roaninish, May 25th.

Turnstone.—Small parties still in evidence up to May 25th.

Whimbrel.—A few remained on the Sheskinmore, and at Inishkeel.

Heron.—About six pairs were nesting on Lough Aderry. As in former years, only eggs were found; none then with young.

Goose (? species).—A solitary Grey Goose observed May 21st at the Sheskinmore; it appeared to be a strong bird on the wing, and would not allow too near an approach.

Red-breasted Merganser.—A small party frequented Dawros Bay. One pair found nesting on Lough Aderry.

Lesser Tern.—The colony formerly nesting on Cashelgolan Strand have evidently now ceased to breed there; only the smaller numbers at Ballyiriston remain.

Arctic Tern.—The considerable colonies that used to nest on Roaninish and Inishbarnog islands seem to have been harassed, causing them to forsake these haunts. Large numbers now breed on some of the islands of the fresh-water lake, Lough Kiltooris, and on one of the islands of the Gweebarra Bay, near Ballyiriston.

Common Gull.—Many pairs now nesting on certain of the islands in Lough Derryduff.

Herring-Gull.—Numbers found nesting on the low rocks of Roaninish Island, and one pair we found with eggs on an island in the fresh-water lake, Lough Kiltooris. It is possible that the nesting of this bird in the former locality may account for the absence of the Arctic Tern nowadays.

Iceland Gull.—An immature bird shot about five years ago near Inishkeel, now preserved at the rectory.

Pomatorhine Skua.—One picked up dead at Lough Kiltooris, May 29th, 1892, was presented by the writer to Dublin Museum.

Manx Shearwater.—A few were seen between Dunmore and Roaninish.—J. Steele-Elliott (Dowles Manor, Shropshire).

BATRACHIA.

Pugnacious Propensities of Rana esculenta.—In June, 1904, I chose a particularly wet day for a Frog-hunt along the ditches round the paddy-fields on the outskirts of Kobe. There were plenty of Frogs, chiefly *Rana esculenta*, also the pretty little *Hyla arborea*, and a few *Rana rugosa*. I had secured one or two, and was pointing to another with the point of my umbrella to draw the attention of a friend who was with me, when, to our great surprise, the Frog made a snap at the umbrella. This it did several times, following the point of the

umbrella as I drew it towards me, till it came within reach, and I secured it with my hand. I then repeated the experiment with another, which acted in the same way, as did several more. All were *R. esculenta*. This action surprised me very much, as I had never heard of Frogs being pugnacious, and I should much like to know if this is characteristic of the species.—Lionel E. Adams (Reigate).

PISCES.

The Pearlsides (Maurolicus pennantii) up River.—An unusually high tide on the 11th March overflowed the banks of the River Bure at several places not far from this town. A new railway-bridge spans the river, and here the "wall" has not been properly restored, so that the rising water found easy access to the neighbouring ditches and gardens of the lower level on the other side, into which it poured like a mountain torrent. I visited this spot some few days after, and was surprised by finding a 1¾ in. specimen of the above silvery little fish lying on the railway-bank just on the edge of a gully formed by the rushing water, about three miles from the harbour mouth. It was shown to Mr. Patterson, who first recorded this species locally.—J. E. Knights (87, Churchill Road, Great Yarmouth).

OBITUARY.

Canon Henry Baker Tristram, D.D., F.R.S., &c., &c.

In Canon Tristram, who passed away at Durham on the 8th of March last, we have lost one of our oldest and best known ornithologists. Canon Henry Baker Tristram, D.D., F.R.S., &c., &c., was born on the 11th of May, 1822, was ordained in 1846, was appointed Master and Vicar of Greatham in 1857, and Canon of Durham in 1870.

He commenced the study of ornithology early in life, and was from the beginning an ardent collector. His first experience of outdoor work outside Europe was at Bermuda, where, as army chaplain, he remained from 1847 to 1849. In 1855 he went to Algeria on account of his health, and, in fact, his lungs were so greatly affected that he was sent there as a last resource, and was scarcely expected to return; but he soon recovered sufficiently to be able to do some excellent work in ornithology, and collected largely, both birds and their eggs, as can

be seen from his papers contributed to and published in the first volume of the 'Ibis,' in which he described nine new species of birds from the Sahara ('Ibis,' 1859, pp. 57–59). It is remarkable that in this volume Canon Tristram wrote as follows (p. 429):—"Writing with a series of about 100 Larks of various species from the Sahara before me, I cannot help feeling convinced of the truth of the views set forth by Messrs. Darwin and Wallace in their communications to the Linnean Society, to which my friend Mr. A. Newton last year directed my attention—'On the Tendency of Species to form Varieties, and on the Perpetuation of Varieties and Species by Natural Means of Selection.' It is hardly possible, I should think, to illustrate this theory better than by the Larks and Chats of North Africa." From this extract it will be seen that Canon Tristram was one of the first ornithologists to recognize the importance of the Darwinian Theory. Besides the sojourn in Algeria, which extended from 1855 to 1857 Canon Tristram visited and made collections in the Holy Land, Moab, Egypt, the Canary Islands, and even Japan, which he visited in 1891. Canon Tristram's large collection of birds, which is especially rich in island forms, he disposed of to the Liverpool Museum, but even after having parted with it he continued to collect almost as ardently as ever until a few months previous to his death, and has left a collection of about five thousand birds. His collection of eggs he sold some years ago to the late Mr. Philip Crowley.

Canon Tristram was a most industrious writer, and contributed largely to the 'Ibis' from 1859—when the British Ornithologists' Union, of which he was an original member, was founded—to 1904. His first paper in vol. i. was on the Ornithology of Palestine, and in the 1904 volume—his last communication to that Journal—a long letter will (p. 164) be found, which treats also of the 'Birds of Palestine.' His chief works are as follows:—'The Great Sahara,' published in 1860; 'The Land of Israel,' published in 1865; 'The Land of Moab,' published in 1873; 'The Natural History of the Bible,' published in 1873; 'The Fauna and Flora of Palestine,' 1884; 'Rambles in Japan,' &c., 1895.

He married in 1850, but lost his wife just three years previous to his own death, and leaves a large family of daughters, but only one son, who is the headmaster of Loretto College.

H. E. D.

NOTICES OF NEW BOOKS.

Darwinism and the Problems of Life. By CONRAD GUENTHER, Ph.D., &c. Translated from the Third Edition by JOSEPH MCCABE. A. Owen & Co.

THIS book should be read by all who wish to keep abreast of evolutionary literature; it advocates what has been called "the all-sufficiency of natural selection," but carries Darwinism into ethics, and makes it a dominant factor in the "social contract." The author, however, makes fair admissions, such as "Hence those who accept the theory of evolution are not at all compelled to subscribe to the theory of selection; in fact, there are many evolutionists who reject it." This is not always understood, and there are many, again, who recognize selection as a factor, or the dominant factor, but not the sole factor in evolution. The method of the work is to dispense as far as possible with referring to authorities, or giving biological references, but rather, as one may say, to treat the whole subject *de novo*, and to deal with animal life direct. This has its advantages in not bewildering an ordinary reader with constant references to a literature he will neither have the time to consult nor the knowledge to grasp; on the other hand, it sometimes produces the appearance of personal dogmatism in statements that without authority are at least bald. Thus, in discussing the effect of "isolation," and dealing with fishes that may have passed into waters not usually connected with rivers, and which would be cut off when the rivers fell once more, Mr. Guenther remarks:—"Selection had another effect in their new home. In the hot season most of the water dried up, and this was the occasion of the conversion of the swimming-bladder into lungs." Now, surmising that death was an equally probable concomitant of these conditions, such a conversion of bladder into lungs, which must on evolutionary principles be admitted, is not well advanced by such an illustration, nor is the biological metamorphosis understandable by

blank assertion. On the other hand, no evolutionist can grasp the whole detail of the evolutionary campaign, but an adequate conception of which often becomes possible by the thorough study of some biological division. This idea of conception rather than simple definition is well expressed by our author when he writes: "But while Darwin has destroyed species as *realities*, he has at the same time fully established the *idea* of the species."

This book is informative and suggestive to the last degree, however much the reader may dissent from some arguments in the discussion of a problem, which is really the highest that can engage the limits of the human intellect, or, as might be said, the sensations derived through our few senses. It is novel to find Nietzsche brought into court, and his "egoism" described as "built up rigorously on a basis of selection." One error of fact is at least put forward when it is stated that in the case of Moths as well as Grasshoppers, "there is not a very great difference in habits between the larva and the imago"; and at p. 194 "*callima*" should be written "*Kallima*."

The Birds of the Isle of Man. By P. G. Ralfe. David Douglas.

As Mr. Ralfe remarks in his Preface, "The fauna of an island, with its sharp definition, must usually be of greater interest than that of a mainland area of equal size," and a standard book on the birds of Man is a very welcome and useful publication. The genuine Manx birds number one hundred and thirty-eight, which, with forty-five occasional visitors, brings up the total to one hundred and eighty-three. Of these, seventy-five are resident (breeding), eighteen regular summer migrants (breeding), and forty-five regular autumn, winter, or spring migrants (not breeding). Among the birds not found on Man may be mentioned the Jay and the Tawny Owl.

There is very much more in this book than the enumeration and narrative of the birds. The introductory portion is very full, and the peculiarities of the vertebrate fauna well described; while, besides the "Manx bird-names" appended to many species, there is also a short glossary of Manx words used in the volume. Another very pleasing and attractive feature is to be found in the numerous photo-plates of Manx scenery; this might be

followed in other local ornithological books, for we seem to recognize the haunts of various species, and the tourist, as well as the ornithologist, should take this volume with him when visiting Man.

The Twite has been found breeding both in the north and south of the island, and is described by Mr. Ralfe as "an inhabitant of mountains and high wild coast-lands." *Corvus frugilegus* is now an abundant species, and our author enumerates twenty Manx rookeries. The Chough is reported "as more frequent in Man than is perhaps generally supposed," the account of this bird being given in a very full and interesting manner; and we re-echo the plea made by Mr. Ralfe who, recognizing its may be inevitable extinction "in the course of natural law," earnestly asks "all professing interest in the ornithology of Britain to abstain from the encouragement of any action (punishable also by Manx law) which may accelerate that extinction in this perhaps the most easily accessible of its British haunts."

Report on the Immigrations of Summer Residents in the Spring of 1905. By "The Committee appointed by the British Ornithologists' Club." Witherby & Co.

This publication, which forms vol. xvii. of the 'Bulletin of the British Ornithologists' Club,' is to be obtained separately, and should be in the hands of all students and lovers of British birds. The Committee consisted of Dr. F. G. Penrose (Chairman), M. J. Nicoll, N. F. Ticehurst, H. F. Witherby, and J. L. Bonhote (Secretary). The immigrations of twenty-nine birds are reported, illustrated by thirty-two maps, and the outlay made by the Club should be returned, for it is almost a duty to acquire this information on an intricate subject, and to support by purchase so excellent a Report. For this reason we have thought it unfair to make quotations from its pages, merely confining ourselves to the remark that one may gain a very considerable appreciation of the method and extent of this immigration by a study of the maps alone.

EDITORIAL GLEANINGS.

During the calendar year (1904) 330 mammals and 271,342 birds were imported into the United States under permit. Among the mammals were 11 Beaver from Canada, and 106 Squirrels from Europe. Of the birds, 232,617 were Canaries, 942 Pheasants, 3568 Quail, 1043 other game birds, and 33,172 miscellaneous species. Among the last-mentioned species were several from India seldom brought to the United States, a Horned Screamer and several other rare species from South America, and a Somali Ostrich (*Struthio molydophanes*), the first ever brought to that country. Two shipments of fifty Madagascar Weavers (*Foudia madagascariensis*) are also of interest, as they belong to a species which might become injurious should it once gain a foothold in the country.

Several entries, both of eggs and birds, show the progress of efforts to stock covers with foreign game birds, chiefly Pheasants, Partridges, Quail, Capercailzie, and Black Grouse. The total number of eggs imported was 2858, of which about 660 were those of Partridges, and the remainder those of Pheasants. Among the consignments of game birds was one containing 192 Hungarian Partridges, destined for South Carolina. In spite of repeated attempts, the introduction of the European Partridge into the United States has not yet been satisfactorily accomplished, and experiments with eggs are not more successful than with birds, less than fifty per cent. of those imported in 1904 having hatched. The importation of Chinese Quail for market purposes in California was practically stopped early in the year by the enforcement of a provision in the State law prohibiting the sale of these birds. Two shipments of Mexican Quail—one for California, the other for Bowling Green, Kentucky—also deserve mention. By far the most interesting game birds imported, however, were about 100 Capercailzie and 25 Black Grouse. These birds were liberated on Grand Island, Michigan, which a private corporation is converting into an important game-preserve. This experiment marks a notable step in the introduction of the Capercailzie into America, and its result will be watched with even greater interest than that made by the Fish and Game Commission of Ontario in 1903.—T. S. Palmer ('Yearbook,' Dept. Agricult. 1904, U.S.A.), p. 609.